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Pt. II

1949 **File No.** 224/48

PW **DEPARTMENT**

B CLASS El **BRANCH**

Subject:— Conference

Power Engineer's Conference at New Delhi, Agenda, Proceedings etc

BK 49

El

File No. 224/48 Pt. II

Std. Sectt. Slip 24-A

Std. Sectt. 78 o.

G.R., G.D., No. 2408, dated 22-6-22.]

Correspondence

DOCKET SHEET

Subject :—

File No. 224/48 II

P. W. DEPT.

El. BRANCH.

References :—

Date	To whom sent.	Notes and instructions.

Goverment of India.

MINISTRY OF WORKS MINES AND POWERS.

No.EL.II/150(48) Dated New Delhi, the 1st Feb.1949.

From

N.P. Dube, Esquire, M.A., (Cantab)

Under Secretary to the Govt. of India.

To

AllProvinceial Governments & Chief Commissioners

Subject:- Power Engineer's Conference to be held at New Delhi from 21st February 1949.

Sir,

I am directed to refer to this Ministry's letter No EL.II/150(48) dated the 15th January 1949 on the above subject and to state that the Power Engineers' Conference will be inaugurated at *10-30 a.m. to 1-00 p.m. and 3-00 p.m. to 5-00 p.m. from 21st to 24th February 1949.

* 10-30 a.m. on 21st Feb.'49 at the Council of State Chamber and that the Conference will be in session from

2. In their letter No:T-30101 dated 22nd January 1949 (AppendixI), the Central Electricity Commission, Simla have already asked the Chief Engineers of Provinces and States to prepare themselves on certain specific points on the Agenda: it will, however, be useful if your representatives could, in addition, also bring with them to the proposed Conference some information on your power projects as described in Appendix II to this letter.

3. This letter may kindly be acknowledged and the follwing particulars sent to this Ministry at an early date:-

(i) The name(s) of your Power Engineer(s) who will attend the Conference;

(ii) Whether your representative (s) desire(s) residential accommodation to be reserved; and

(iii) Whether or not your representative(s) are vegetarians.

Yours faithfully

Sd/-

(N.P.Dube)

Under Secretary to the Govt. of India.

1. Two copies forwarded for information and necessary action to:-

(i) Ministry of Industry and Supply.

(ii) Ministry of Railways.

(iii) Ministry of Transport.

(iv) Ministry of Defence.

(v) Ministry of Comm unications.

(vi) MiCentral Waterpower, Irrigation & Navigation Commission New Delhi,

(vii) Damodar Valley Corporation, Calucutta.

(viii) Head of the Power Engineering Department, Indian Institute of Science, Bangalore.

(ix) The Institution of Engineers (Inda), 8- Gokhale Road, Calcutta.

(x) The Federalion of Electroiity Undertakings of India, Victoria House, Calcutta.

(xi) M/S Tata Hydor Electric Agencies, Bombay House, Bruce Street Fort Bombay.

2. Twenty spare copoes to the Ministry of States with the request that the follwing be also addressed in the same terms:-

1. Mysore	2. Travancore.	3. Hyderabad.
4. Baroda	5. Bhopal	6. Bikaner .
7. Cochin	8. Madhya Bharat.	9. Jaipur.
10. Jodhpur.	11. Jajasthan	12. Patiala.
13. Kolhapur .	14. Rampur.	15. Saurashtra.
16. Vindhya Pradesh.	17. Himachal Pradesh.	

It is requested that the Government of Jammu & Kashmir be also invited to the Conference. It will appreciated therefore if a copy of this letter. together with a copy of this Ministry's letter dated 15-1-49 (copy enclosed) could be sent to that state.

3. Copy to the Estate Officer, New Delhi.

4. 5 spare copies to the C.E.C., Cleremont, Simla, with reference to their U.O.No. T-310101 dated 27-1-49.

6. Two spard copies to the Cabinent Secretariat, for information.

Sd/-

(MP.Dube)

Under Secretary to the Govt. of India.

APPENDIX I.

Copy of a letter No. 2-30101 dated 22nd January, 1949 from Central Electricity Commission to All Chief Engineers of the Chairman Provinces and States.

Subject:- Power Engineers' Conference to be held at New Delhi from 21st to 24th February, 1949.

We have to advise that the Ministry of Woks, Mines and Power have decided to hold a conference of Power Engine-ers at New Delhi on the 21st , 22nd ,23rd and , if possible on the 24th February, 1949, to dicuss some problems relating to the Electric Power development in India. The Hon'ble Shri,N.V. Gadgil, Minister for Works, Mines and Power will open the Conference on the 21st Feb. 1949,A copy of the Ministry of Works, Mines and Power letter No, El.II /150(48) dated the 15th January , 1949, together with a copy of the agenda, sent t to your Government is enclosed herewith for your ready reference You will note from the agenda that under item(1), the Conference will review the position in respect of the recommendations made in the resolutions passed by the Technical Conference of Power Engineers held in Calcutta in January, 1944. Extracts of the resolutions effecting,your province are enclosed herewith. We shallbe glad if you will please send us your comments on these resolutions so as to reach us by the 7th February, 1949;

(for U.P. Only.) " We you kindly send copies of these extracts of resolutie ions to your Electrcial Engineer on the Ganges Canal Scheme and the General Manager of the Knapur Electric Supply Administation and request them to send their comments direct to this Office."

With regard to Item(1) sub item(ii) -Survey of Projects: This Commission will present a survey of the projects as known to us. Any brief notes you may send us indicating the present position , would be helpful. We would request you to come prepared to take part in discussionson this subject.

Item II- Rural Electrfication Schemes:- We have

no doubt that you have such schemes under condieration and we would request you to contribte your views at the Conference.

Among the remaining items on the agenda, I wish to comment on the follwing two points...

1 . Training of Engineers: We shall be glad if your wil will please advise us regarding the number of engineers sent by you for training abroad during the last five years, excluding short-term deputation visits- and how many of these were subsequently em loyed in your own organisations.

We would also like you to indicate the additional number of engineers in different categories, whose services would be requiring in your projects during the next five years and what steps, if any, are being taken by you to train such personnel

2. Papers on Technical Subjects of general interest:-

We shall be glad if Engineers in your organisation can contribute papers on technical subjects which will be of interest to the other provinces. We wuld request you to send us, if possible, copies of such papers or at least their synopsis so as to reach us by the 10th February, 1949.

We would also request you to confirm whether you will be attending this Conference. Your requisition for accommodation in Delhi may be forwarded to us in the form enclosed herewith and a duplicate copy may be forwarded direct to the Ministry of Works, Mines and Power at New Delhi so as to reach the Under Secretary before the 5th February, 1949.

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APPENDIX II.

Project Report.

(1) A project report- indicating mainly a story or history of the project, the approximately programme of construction, the expenditure to be incurred under various heads, and the b benefits financial and otherwise, expected from the project from year to year

(2) A set of plant and transmission line specifications if issued.

(3) An indication of the exact stage reached in respect of

planning and designing.

Has the project been sanctioned? How are funds for the project being provided? For what period are the funds sanctioned? How much of this expnditure in next five years is in respect of (a) orders already placed (b) orders still to be placed.

(4) The expn diture actually incurred so far separately under-dollar- sterling and local currency, showing the purpose for which expnditure was incurred and the estimated annual expenditure for the next five years in these currencies.

(5) When are orders expected to be placed, and what is the estimated delivery period for the plant?

(6) Has the administrative machinery for the project been (a) sanctioned (b) set up.

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No. 0/1389-B.

Reconstruction Department.

Bombay Castle, 8th February 1949.

Forwarded to the Public Works Department for disposal.

By order of the Government Bombay,

Sd/-

Assistant Secretary to Government

Sd/-
8.2.49

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224/48/9201.

El.Br. P.W.D.

The Central Ely, Commissions' letter, was ~~received in par~~ noted para 2 of the G.Of I . letter within, G.of B., who has since was received by the Elecl. Commr. with the furnished the necy. infomration to the G.of I. with the approval of th e H. M., P.W.D. All the papers on the subject are at present with the El. Commr. who is to attend the confce. in question. These papers may also be sent to him for necy. action with refce. to 'A' in para 2 and for communicating to the G. of I direct, the information called for in para 3(iii) of the G.of I letter within.

2. Regarding para 3(i) of the G.of I. letter , the Central El. Commission has already been informed under G.E. No. 224/48-El. dated the 4.2.1949 , and with refec to para 3(ii) of the G. Of I. letter, the El. Commr. has been requested to Communicate the necy. information direct to the Central Govt.

3. The draft put up for approval may issue first and then the papers may be sent to the El. Commr. for his use and necy. action.

Sd/-

9.2.49.

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No. 224/48-El. P.W.D.

B.C. 9th Feb. 1949.

To

The Secy. to the G.of I.

Ministry of Works, Mines & power New Delhi.

Subject:- Power Enginee rs' Conference to be held at New Delhi from 21st to 24 the February 1949.

Sir,

I am to acknowledge the receipt of your letter No. EL.II/150(48) dated the 1.2.1949, and to state that the informn. called for in para 3(i) of your letter has already been furnished in this G.L. No. 224/48-El. D. the 4.2.1949, addressed to the Central Ely. Commission and Copy. endorsed to you. The particulars refd. to in para 3(ii) & (iii) of your letter quoted above will be sent to your direct by the El. Commr. with the G.of I.

Yours faithfylly

Copy with copy of the G.of I letter under reply forwarded for information and necy. action to the El. Commr. with the G.of I in continuation of E.E. No. 224/48-El. d. the 4.2.49.

Sd/-

9.2.49.

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Below P.W.D. U.O.R. No. 224/48/9101, dated 9.2.1949.

Electrical Grid Offices.

Returned with compliments.

2. Necessary data as per Appendix II at paga 3 ante was taken to the Conference but there was not sufficient time to discuss individual projects in detial.

Sd/-

The Secy. to Govt.,

P. W.D. Bombay,

U.O.R. No. T.C .B. -20/4189

Bombay 1: 28th March , 1949.

B.V.P.

1. Name of Province/ State : Bombay.

2. Name of Project:

3. (a) Date of commencement of construction , actual or proposed :

(b) Date of completion:

4. Total capital cost (exclusive of interest charges):

5. Ultimate percentage return (allowing for working expenses and depreciation, but not interest on captial):

6. Brief particulars of the project:

7. Estaimated yearly expenditure in lakhs of rupees:

	To end of 1947-48.	1948-49	1949-50	1950-51	1951-52	and so on till completion of the project.
(a) Dollars						
(b) Sterling						
(c) Domestic						
(d) Total						

(e) Method of financing the project.
(i) By way of loans from the Central Govt.
(ii) By way of development grant from the Centre.
(iii) From Provincial or State resources.

8. Principal Materials required or utilised:-

(a) Steel-tons.
(b) Cement-tons.
(c) Petrol-tons.
(d) Diesel Oil-tons .

9. Benefits to be derived:

9. Benefits to be derived.

	1949-50	1950-51	1951-52	1952-53	1953-54	and so on till the full benefits are obtained.
(a) Additional food crops-acres.						
(b) Additional food-tons						
(c) Additional non-food crops-acres.						
(d) Power -New KW installed.						
(e) Other benefits.						

NOTES ON BOMBAY PROJECTS.

1. Information about "Koyna Valley Hydel Scheme" as required for the proposed conference has not been supplied to this office . Two sets of blank forms are enclosed herewith. The required information may kinldy be supplied now completed in all respects.

2. In some of the porjects it has been shown that irrigation development willbe full during the first year of taking up the scheme.This does not seem prossible and may please be verified.

3. In some cases full development of irrigation has been shown against all the years together. It is requested that the additional acreage that willbe brough under irrigation may please be shown by different years.

4. Requirements of money-both dollars and non-dollors should be shown in equivalent rupee currency.

5. For some projects, like Patadungri Project you have shown requirements of materials from the years 1940-50, whereas money required (including domestic currency) are shown from the year 1952-53. Surely money should be required as soon as materials willbe arranged.

6. Information regarding the extent of irrigation supplied from time to time does not always tally. Correct figures may now be filled in.

7. Some details about the dam across Panam River for the "Mahi Canal Project" may please be given.

8. Similary for the Gnagapur Project.

9. Regarding total cost of Patadungri Tank the figures given previously do not tally. These may be checked up.

10. Watrak Canaal Scheme. Storage work. Information as for 7 & 8 above is required.

11. Similary for Girna Project & Vir Dam and Khadakwasla Projects .

12. Information regarding:-

    1. The Mula Project
    2. The Kukadi Project.

3. Bhima Project

4. Dhom Project .

5. Pick-up.weir across Malaprabha.

6. Asoga reservior (storage on Malaprabha)

7. Gokak left back canal extension scheme.

8. The Deaddi Project.

9. Markandeya Psoject.

10. The Dharma Canal Scheme.

may please be supplied in the proforma if they are going to be taken up within the next sevem years.

13. No information regarding Ranand Tank, Budihal Tank and Ghataprabha left bank canal prljects, is available with us . This may please be filled in the respective proforma. Progress up to data may also please be indicated.

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B.V.P.

KOYANA

6

1) Name of Province /Ministry- Bombay.P.W.D. (Electric Grid Department)

2) Name of Project:- Koyna Hydro Electric

3) (a) Data of Commencement of Construction, actual or proposed :- 1950

b) Date of Completion:- First stage -1956

Second " -1964

4) Total capital Expenditure :- Rs. 4560 lakhs.

5) Ultimate percentage return (after dellucting for working expenses and depreciation, but not interest on capital): 3½% per year after 9 years of commencement of electric supply . The defecits till the scheme earns 3½% will be adjusted against surpluses in the follwing years.

6) Brief particulars of the project:- This is an Irrigation -cum-Hydro Electric Scheme(high head) depending upon storage part of which is reserved for irrigation and a large block of power is supplied for irrigation Power willbe supplied to Satara, Poona, Bijapur , Sholapur , Ratnagiri and Thana Districts of the Province.

7) Actual estimated yearly expenditure in lakhs of Rupees.

	To end of 1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
a) Dollars.	-	0.78	5.74	15.21	5.10													
b) Sterling	-	0.06	4.59	48.67	16.23													
c) Domestic	-	2.26	11.71	22.68	304.54													
d) Total	-	3.10	22.04	86.56	325.87	491.39	541.17	513.18	558.34	231.95	173.92	185.40	131.76	92.93	70.48	68.91	26.96	12.66

(Total- 3539.44)

a) Method financing the project

i) By way of loan from the Central Govt.

ii) By way of development grant

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
from the Govt. iii) From the Provi-ncial Govt. reso-urce.																			

8 Principal Materials rewarded or utilized

	To end of 1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
(a) Steel - tons	9	590	2340	5500	9200	8500	6700	5100	5000	2200	1400	1400	1300	900	700	400	
(b) Cement-tons	54	200	1920	6250	26000	79000	113000	149000	31000	1000	1200	1200	1100	800	700	650	
(c) Petro-tons	4500	5000	8000	18550	67400	126200	157300	193400	44450	4600	3200	3200	2900	2100	1700	1270	
(d) Diesel oil-tons	12	12	525	2300	3000	3000	3000	3000	1000	-	-	-	-	-	-	-	

9 Benefits to be derived.

(a) Addl. food crops acres — 440000 Acres

(b) Addl. food tons, — 320000 Tons

Note:- Actual 80,000 kw. will be used for irrigation and balance for large and small scale andindustries in large urban rural areas.

(c) Addl. food crops acres.

(d) Power-new kw installed — 315000 kw installed

(e) other benefits

10) If the project is a multipurpose one the follwing additional information may be supplied.

(a) Capital cost allocated to Irrigation---------- Rs. 1020 lakhs.

(b) " " " Power " 3540 "

(c) Dollar and Sterling required for Irrigation.

(d) " " " " " power ---------- " 1400 "

(ii) Progress to date

(a) Preliminary survey and Investingation. The Project is at present in an advanced stage of investigation of the Dam Site, tunnel alignment, pipelineway, Generating Station and Colony Sites, transmission line routes. Sub/Station Sites, Railway track alignment etc. At the dam-Site and the powerstation - waste weir sites detailed examination of rock strata in being carried out by boring and trial pits.

11) A tentative programme with an estimate has been drawn up. To avoid delay in starting construction work, Govt. have been addressed to permit ordering out such essential equipment and constructiong essential temporary quarters prior to the sanction of the Project.

Contd(a)

(b) Preliminary Works, buildings etc. Nil

(c) Main Civil Works . Nil

(d) Power Units and electricity Transmission and distribution Nil.

12) - General -

(1) Dr. L.J.L. Savage, American Expert on Dams was consulted . He has sent favourable report after inspecting the Sites.

(ii) Shri. A.N. Khosla. Chairman C.W.I.N.C. also inspected the sites in Feb. 1949.

(iii) A Geologist from the Govt. of India, specialised in Engineering geology has been deputed to advice on the foundation for the damand other matters.

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KALINADI

1) Name of Province or Ministry	Bombay , Public Works Department. (Electric Grid Department.)
2) Name of Project	Kalinadi Hydro Electric (Supa Power Station).
3) (a) Date of Commencement of construction, actual or proposed	Not estimated
(b) Date of Completion	Seven years after commencement
4) Total capital cost(exclusive of interest charges)	Rs. 12.22 crores (Approximately)
5) Ultimate percentage return (after deducting for working expenses and depreciation but not interest on capital.)	3½% per year.

6) Brief Particulars of the Project: The power station willbe situated below a dam across the Kalinadi about 2000 yards down stream from Supa Power will be supplied to the Southern districts of the Province . The Scheme is a part of the entire scheme of Power resources in the Kalinadi basin and is prposed to be taken up in the first instance.

7 Actual estimated yearly expenditure in lakhs of Rupees.

	To end of 1947-48	1948-49	1949-50	1950-51	1951-52	1952-53 and so on
(a) Dollars						
(b) Sterling		Rs. 500 lakhs.				
(c) Domestic.		Rs. 700 lakhs.				
(d)						

(e) Method of financing the Project

(i) By way of loans from the Central Government.

(ii) By way of development grant from the Centre

(iii) From Provincial Government. Resources

Not decided.

B.V.P.

8) Principal materials required or utilised.

Rough figures arising Investingation in 1949 and constructing a commence in 1950.

	To end of 1947- 48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	Total
(a) Steel-tons			20	300	1200	600	700	100	100	3020
(b) Cement -tons			1800	18500	34300	45200	37800	20600	300	146800
(c) Petrol-Gallains			2 200	20000	40000	4600 ~~40000~~	41000	24000	10000	182200
(d) Diesel-oil- tons.			20	500	1600	1600	1600	1600	1100	8020

9) Benefits to be derived.

	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
(a) Additional food crops- acres.	:Power will be made available for lift irrigation.					
(b) Additional food Tons.			-do-			
(c) Additional non-food crops-acres.			-do-			
(d) Power-New kw installed			60000 kw installed.			
(e) Other benefits.			Industrial development of a relatively backward area to raise the standard of lining of the people appreciably.			

TTTTT

10) If the project is a multipurpose one

the follwowing additional information may be supplied.

(a) Capital cost allocated to Irrigation Nil

(b) " " " " Power

(c) Dollar and sterling required for Irrigation :

(d) " " " " " Power : Rs. 500 lakhs.

11) Progress upto-date

(a) Preliminary works and investigations. Messrs. Associated Consulting Engineers(India) of Bombay and London were interested with the work of making a preliminary rreport after investigation in 1947 Their report has since been received and is under serutiny.

(b) Preliminary Works, buildings, Communications, Collection of material and construction Equipment . Nil.

(c) Main Civil Works. Nil.

(d) Power units and electricity Transmission and distribution equipment. Nil.

12) General Remarks: This Scheme i.e Supa Power Station is being serutinised for being taken up in the first instance as part of the entire resources of Kalinadi Basin consisting of 4 power stations and will follow supply from Jog if that is taken up earlier.

B.N.P.

224/48/17908

El. Br. P.W.D.

In their letter, d. the 4.3.1949, the Gpof I. have stated that they require necy. information as mentioned on p. 17 ante by the 19.3.49. The attention of the El. Commr. may be invited to item 1 on p.17 and he may be requested to supply the necy. information re: the Koyna-Valley Hydro-el. Scheme". in the two sets of blank forms on pp.13-15 ante.

2. The El. Commr. may also be requested to furnish the spare copies of the data, refd. to in para 2 of his note within , for the information and use of the office.

3. That officer may be requested to treat the case as immediate since the G.of I. require the requisit informn. by the 19.3.1949.

Sd/-

16.3.49.

IMMEDIATE u.o. to El. Commr. d. 16.3.

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Electrica Grid Offices.

All available information is furnished herewith in duplicate for Koyna and Kalindi(Supa) schemes.

The information called for in para 2 will be furnished in due course for secretariat record.

Sd/-
19.3.49.

The Secy. to Govt.,

P.W.D., Bombay .

U.o.r. No. TCB-20/4621,

Bombay1: 19th March, 1949.

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224/48/19271.

El. Br. P.W.D.

Submitted with refce. to this Deptt. uor. dated the 16,3.49.

2. The informn. furnished by the El. Commr. on pp. 19-37 ante is the same as that furnished by him separately (in

(in file No. 9282/36(I)) ref: Koyna and Kalinadi Schemes along with other Grid Schemes, and is being sent separately to the G.of I. in the above file. In view of that, no action is necy. in this com.. on these papers.

3. 'A' on p. 40 ante may be awaited.

Sd/-

22.3.49. Thro' IB(II) & DE(I)

El. Br. P.W.D.

Resubmitted.

2. The El. Comer's, attention may be invited to "A" on p. 40 ante and he may be requested to furnish the necy.. informn. now.

SD/-

12.5.49. .....

PROJECT REPORT.

NORTH GUJARAT ELECTRIC GRID SCHEME.

1. (a) Short histroy of the project:

Under this scheme, the generating capacity of the Ahmedabad Electricity Company at Sabarmati is being increased from 37,500 to 97,500 KW. After meeting the requirements of the city of Ahmehadad, suplus power is to be transmisted upto Baroda in the South and Kalol in the North and it will serve the area of about 2400 sq miles. It is expected that about 6,000 H.P. irrigation pumping load(some 700 to 800 pumps) will be served within the first 5 years and in the same period electricity willbe made available for domestic lighting, small scale and village industries etc., in a large number of towns and villages of North Gujarat. The scheme is likely to cost Rs. 222.61 lakhs and the work in hadn comprises of the follwing:-

(i) Construction of 70 miles of double circuit 66 KV transmission line from Ahmedabad to Baroada.

(ii) Construction of 14 miles of 33 KV transmission. line from Ahmedabdd to Kalol.
~~to Borsad, Umreth, Kaira, Mehmedabad, Petlad and other places.~~

(iii) Construction of 62 miles of 11 Kv. transmission line to Borsa, Umreth, Kaira, Mehmedabad, Petlad and other places.

(iv) Construction of 480 miles of distribution lines involving construction of an extensive 11 kV system to cover the

(v) * Construction of main Receving Stations at Ahmedabad, Barejadi, Nadiad, Anand, Baroada and Kalol.

(V the territory within a radius of about 20 miles from each of the Barejadi, Nadiad and Anand Receiving Stations.

(y) * The scheme is expected to be self-supporting in the 3rd year of operation i.e. 1952-53.

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NORTH GUJARAT GRID SCHEME.

1.(b) Approximate programme of construction.

No.	Item of Works.	Programme. Commencement	Completion	Expenditure.
1.	66/110 KV. Transmission Line.	Feb. 47	Fe. 49.	23.89 Lakhs (completed.)
2.	Telephone Line.	April 49	Aug.49.	1.18 Lakhs.
3.	11 & 33 KV Lines.	April 50	June.51	16.45 "
4.	Sub-Stations.	Apirl 49	June 50	70.82 "
5.	Distribution.	June.49.	June 53	58.14. "
6.	66/110 KV 2nd Circuit.	June.50	June.51	9.51 "
7.	Additional Switchgear (2nd stage)	June 51.	June.52.	39.97. "
				220.00

3. Stages reached in respect of planning and designing- completed.

a) Estimated expenditure in next five years in respect of orders placed. 88.00 Lakhs.

b) Estimated expenditure in respect of orders to be placed. 85.00 Lakhs.

4. Estimated annual expenditure (in lakhs of Rupees).

Year.	To end of 1947-48 (Actual).	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Dollars.	-	-	1.26	1.26	1.40	1.63
Sterling	18.13	27.40	23.21	23.21	14.40	9.85
Local Cufrency.	11.27	29.18	25.76	18.38	14.88	11.00
Total	29,40	47.58	50.23	42.85	30.68	22.48

5. When are orders to be placed:

Only orders to be placed for items of import are for additional switchgear and distribution materials.

Switchgear order willbe placed inn April 1949.

Distribution- successively in each of the years.49,50,51,52 and 53.

6. Adminstrati e machinery for the project:

(a) Sanctioned- for construction.

(b) Set up ----for construction.

PROJECT-REPORT.

SOUTH GUJARAT ELECTRIC GRID SCHEME.

1. (a) Short history of the project.

This scheme provides for establishment of a Government owned steam station near Surant, with an initial installed capacity of 15,000 Kw. The area within the economic distance of projected lines between Surat and Bulsar is about 900 sq miles. In addition to supply of bulk power to the Electric Supply Companies at Surat, Handerk and Bulsar, supply is intended to be given within the first 5 years to about 350 irrigation pumps varying from 5 to 10 B.H.P. Electricity will also be available in a large number of small towns and villages in this region for domestic lighting small industries, power looms, etc. Bulk power willbe supplied to Baroda Government at Navsari and Billimora. The estimated cost of the scheme is Rs. 301 74 lakhs. A transmission line on steel towers willbe erected for a distance of about 33 miles from Surat to Billimora, with main receiving stations at Surat, Navasari and Billimora. The scheme is expected to be self - supporting in the 4th year of operation i.e. 1954.55.

(b) Appromiate programme of construction:

The work of power House building constructions is expected to start before the end of 1st quarter of 1949. A part of the machinery has been shipped and is expected to be received very soon. Work for railway siding has been already started and is expected to be finished by the end of March . The construction work and delivery of plant and machinery is programmed in such a way that the power station will be put into operation by the middle of 1950.

Item.	Expenditure in lakhs of Rs.	Period of construction.
(1) Steam Power Station	172.65	March 49-June1950

(2) 66KV transmission line.	11.44	June 51-June 1952.
(3) 22& 11 KV "	10.58	-do-
(4). Substation - Switchgear.	43.17	-do-
(5) Substation buildings.	12.45	Oct.50-June 1951.
(6) Telephone lines & eqipment.	1.41	June51-Jan. 1952.
(7) M.T. Consumers.	1.24	Jan.51-Jan. 1952.
(8) Distribution .	37.13 (17.96 upto 1952-53)	Jan.52-Jan. 1954.
Total	290.06	

3. Exact stage reached in respect of planning and designing:

So far, all the orders for machinery have been finalised . A part of the equiment of boilers and auxiliaries have been already shipped and is expected to arrive in the month of March. The remaining machinery for boiler house willbe shipped by stages and is expected to be completely shipped by about middle of 1949. One generating set is scheduled to be shipped by middle of 1949 and another by end of 1949. Switch gear and electrical quipment is expected to be delivered by 3rd quarter 1949. The designs of buildings are complete and contracts for construction of power station buildings are expected to be very soon finalised. The stage of planning and designing for this powerhouse has been completed and the execution stage has been entered into, which is expected to be finished by the middle of 1950.

Designs for Transmission Lines and Substations have been completed. Designs for Distribution willbe taken up in due course. orders for transmission are placed withMessrs. English Electric Co. dated 10.12.1948.

Specification for 66 kV Transmission lines have been issued.

Specification for substations are ready .

Specification for 22 and 11 KV lines and Distribution will be prepared shortly.

Specification for telephone equipment is under preparation.

4. Estaimated annual expenditure (in Lakhs of Rupees):

	To end of 1947-48 (Actual).	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Dollars.	0.26	-	2.00	0.17	-	-
Sterling.	0.26	8.64	44.72	29.54	24.38	8.42
Local Currency.	-	7.36	75.03	18.58	35.21	35.75
Total.	0.26	16.00	121.75	48.29	59.59	44.17

5. When are orders expected to be placed and what is estimated delivery of plant.:

Item.	Orders to be placed.	Estimated. delivery.
(1) 66kV Transmission Lines.	Jan. 1949.	Jan. 1951.
(2) 22& 11 kV Transmision Lines	Sept. 49.	Jan. 1951.
(3) Substation Switchgear.	July. 1949.	Jan. 1951.
(4) Substation buildings.	March 1950.	Oct. 1950.
(5) Telephone lines & equipment.	Aug. 1949.	Jan. 1951.
(6) H.T. Consumers.	Dec. 1949.	Jan. 1951.
(7) Distribution.	March 1950	Dec. 1951.

6. Administrative machinery for the project:

Planning, designing and placing orders for machinery, etc for the project has been completed and only execution work remains, for which necessary staff has been sanctioned and mostly secured. List of staff required for operation and maintenance of the plant is being prep ared and is expected to be submitted soon for sanction.

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PROJECT REPORT.

DIESEL NURSERY SCHEMES.

1.(a) Short history of the project:-

Insolated small towns which cannot be served from major Grid Schemes but which have chances of developing cottage industries and /or agricultural pumping are proposed to be supplied with

electricity from small diesel stations or by obtaining bulk power from the nearest linensee's generating station wherever possible. About 25 small towns in various districts of the Province, 22 villages in Satara taluka and 10 villages in Bulsar taluka are scheduled for electrification during the first 5 years from local diesel station. The first four stations under construcgion in the Ratnagiri District are due to be completed soon and the Satara and Bulsar Villages and towns of Islampur and Peth are expected to be electrified by about the end of 1949. The schemes are liely to cost Rs. 112.60 lakhs and are expected to be self.supporing after 8 to 10th year of operation.

For other items, please seeattached sheet.

4. Estamiated annual Expenditure (in lakhs of Rs.)

	To end of 1947-48. (actual).	1948-49.	1949-50.	1950-51.	1951-52.
Dollars	-	-	1.97	2.20	2.07
Sterling	-	-	11.73	11.17	2.80
Local Currency.	0.50	12.00	18.20	17.90	21.82
Total	0.50	12.00	31.90	31.27	26.69

B.V.P.

NURSERY SCHEMES.

Sr. No.	Particulars	NAME OF THE SCHEMES. Ratnagiri District.	Islampur	Satara Taluka	Bulsar Taluka	Bijapur Taluka District.	East Khandesh District.	Belgaum District.	Four Isolated Towns.	Remarks.
1	2	3	4	5	6	7	8	9	10	11
1.	(b) Programme of construction.	Oct.1947 -Jan.1949	Jan. 1949- Oct. 1949.	Oct.1949- May.1950	Oct.1949 -May. 1950	*Jan. 1950 Dec. 1950	Oct.1950- Oct.1951.	Feb.1951 Dec. 1951.	*Nov. 1951-Dec. 1952.	* This will depend upon the delivery positions of plant and machinery.
	(c)Expenditure under various heads.									
	(i) Land,P.H.Bldg.and Machinery.	7,80,910	2,21,000	INCLUDED IN(iii)		6,28,240	3,79,800	6,09,000	11,65,100	
	(ii) Transmission and Distribution. lines.	3,97,260	1,12,000	6,08,000	2,69,500	4,07,287	4,92,200	7,47,190	4,39,371	
	(iii)Transformers, Switchgear, Services etc.	5,17,170	1,18,600	5,37,000	2,24,000	2,42,573	2,67,700	3,88,280	4,30,144	
	(iv) Testing Apparatus.	21,600	5,400	9,600	3,800	-	7,300	14,600	30,320	
	TOTOAL:	17,16,940	4,57,000	11,54,600	4,97,300	12,78,100	11,47,000	17,59,850	20,64,935	
	SAY:	17,17,000	4,57,000	11,55,000	4,97,300	12,78,000	11,47,000	17,59,900	20,65,000	
3.	Planning and Designing.	Surveying &Designing completed.	Surveying& Designing completed.	Surveying completed & designing in progress.			Preliminary survey only completed.			
	Has the project been sanctioned.	Administratively approved & technically sanctioned .	ADMINISTRATIVELY APPROVED.						Schemes will be submitted to Govt.for administrative approval shortly.	
5.	When orders expected to be placed.	Orders placed.	Orders placed	Orders placed.	Orders placed.		Orders for Power House plant and Equipment by June 1949.For the remaing afterwards.		Orders may be placed by 1950.	Delivery period for plant Equipment to be ordered from abroad will be approximately 12 to 18 months.
	Estimated delivery period for the placed.	Machinery has arrived		Most of the Machinery arrived.						

6. Administrative Machinery
(a) Sanctioned — SANCTIONED FOR THE FIRST FIVE YEARS.

(b) Set up. — PARTLY SET-UP.

B.V.P.

PROJECT REPORT.

KOYNA HYDRO-ELECTRIC-CUM-IRRIGATION SCHEME.

1. Short history of the project:

This scheme is capable of developing 280,000 KW of power and irrigating some 440,000 acres of land in the Bijapur District. Power can be supplied to parts of Ratnagiri, Satara, Bijapur, Sholpur, Poona and Thana Districts. It will take some 7 years to complete the works after the scheme is sanctioned. The full development of the scheme will involve the construction of a dam about 300 ft. high across the Koyna river at Jalkawadi in the Satara District, to impound about 1,56,000 million cubic feet of water. Of this quantitity, 44,000 million cubic feet may be used for lift irrigation and 69,000 million cubic feet for power developme ment of about 280,000 kW of power will be possible. The tran smission system would include 132,000 volt lines of nearly 280 miles to laod centres at Karad, Almatti and Sholapur and about 160 miles to Kalyan and distribution lines at 33,000 22,000 and 11,000 volts. The scheme is likely to cost Rs. 3540,000 lakhs and is expected to be self-supporting in the 10th year of operation,

With the use of latter mentioned quanitity of water, development

A preliminary note on the development of the Koyna Hydro Electric -Cum -Irrigaion Project was submitted to Government on 11.6.1948, which contains a report etc. programme of construction and expenditure to be incurred on various heads (summary on attached sheet.)

2. No specifications for plant are yet prepared .

3. The preliminary surveys regarding the Dam.site, Tunnel, Generating Station, pipeline etc., are completed. Foundation exploration by Calyx drills at the dam site are almost completed .

Designs for Dam Tunnel, etc., would be started in a short time.

The project estimates are not submitted to Government and project is not yet a sanctioned project.

The probably expenditure in the next 5 years i.e. upto

1953-54 is estimated to be Rs. 1,473 lakhs. All orders are still to be placed .

4. Estimated annual expenditure for the next 5 years (in Lakhs of Rupees):-

	Up to end of 19-47-48.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Dollars .	-	0.78	5.74	15.21.	5.10	
Sterling.	-	0.06	4.59	48.67	16.23	
Local Currency.	-	2.26	11.71	22.68	304.54	
Total .	-	3.10	22.05	86.56	325.87	

5. (a) Orders for plant are expected to be placed by 1.12.1950. For transformers and switchgear by 1.3.1951.

(b) And deliveries are expected

(a) plant by 1.3.1954.

(b) Transformers and Switchgear by 1.3.1954.

6. Adminstrative machinery for the project has not been sanctioned

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1(a) Programme for construction as tentatively made , assumes starting of the main works such as Dam and Tunnel by 1.1.1951 and completion by 1-1-1956.

(b) Expenditure under various heads:-

(1) Dam.	Rs. 448.31	lakhs.
(2) Approach channel and Tunnel.	Rs. 388.68	"
(3) Pipe line.	Rs. 558.94	"
(4) Generating Station.	Rs. 578.16	"
(5) Offices, quarters, etc.	Rs. 55.95	"
(6) Temporary qurters R & P Power Supply.	Rs. 105.03	"
(7) Transmission lines and Substations.	Rs. 753.92	"
(8) Distrubution lines & Substaions.	Rs. 195.00	"
(9) Contingencies, Consulting Engineers' fees, general and overhead charges, etc.	Rs. 455.45	"

Total	Rs. 3,539.44 Lakhs.
(10) Cumulative interest during construction.	228.64.
.....	Rs. 3, 768.08 lakhs.

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Electric Grid Offices.

In continuation of my u.o.r. No. T.C.B- 20/4621 dated 19.3.49, I at ach hereto copies of the data referred to in para 2 of Government U.O.R. No. 224/48/17908 dated 16.3.49 .

Sd/-
12.5.49.

Encls:- As above.

The Secy. to Govt., P.W.D. Bombay.

U.O.R. No; TCB-20/7798 Bombay 1: 12 May, 1949.

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224/48/32140

El. Br. P.W.D.

Submitted for inform.....

2. The Elecl. Commr. has furnished for the records of this Dpett., copies of the data re: Grid Schemes, which he took with him to New Delhi at the Power Engineers' Conference, recently held.

No further action is necy. on these papers, which may now be recorded.

Sd/-
2.7. 49.

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VERY URGENT

Subject: Power Engineers' Conference, New Delhi , from 21st February 1949 onwards.

In contination of this office u.o.rs. No. TCB-20/1872, dated 31st January 1949, and No. TCB-20/2135, dated 4th Feb. 1949, I will be obliged if the Government of India be requested to reserve for me suitable residential accommodation during the sittings of the above Conference , with effect from Sunday the 20th instant. If possible accommodation may be reserved in the Western Court, New Delhi.

Sd/-
5.2.49.

The Secy. to Govt., P.W.D. , Bombay,

U.O.R.No. TCB-20/2207 5th February 1949.

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224/48/9528

El. Br. P.W.D.

Under G.L. No. 224/48-El. d. the 4.2.48, the Central Govt. has been informed that the El. Commr. would communicate to them direct, his requirements re: accommodation at New Delhi and in the indt. to the above G.L., that officer has been requested to take the necy. action in the matter. It seems the El. Commr's. note overleaf. has crossed the G.E., in question. It is presumed , by now , the El. Commr. has communicated with the G. of I. re: his accommodation. This refce. may be recorded after uor. to that oficer.

Yes I have already written to the Govt. of India in the matter.
sd/-
15.2.49.

Sd/-
10.2.49.

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Immediate n u.o. to El. Commr. d. 15.2.49.

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224/48/11614.

El .Br. P.W.D.

Submitted with refec. to the O.N.; dated the 10.2.49.

2. In view of the El. Commr's. note within , no further action is necy. on this refee.

Sd/-

1.3.49 Record,

B.V.P. ... ...

Khanpam Rai
22/6/56